Amendments to the Drawings:

In the DRAWINGS Section, please renumber original Fig. 10b to Fig. 10c and add new Fig. 10b, presented in the attached New Sheet.

A new Fig. 10b shows a circuit added to modify a reference voltage for temperature compensation, where said reference voltage is taken from the reference circuit **RefCirc** and a temperature compensating voltage is added.

The original Fig. 10b, now 10c shows a circuit to generate a reference voltage with temperature compensation, without using an external supplied reference voltatage.

Attachment: New Sheet for Fig. 10b

REMARKS/ARGUMENTS

In response to the subject Office Action, an Amendment to the Specifications, to the Claims and to the Drawings section is herein submitted.

Examiner Nguyen is thanked for thoroughly reviewing the above referenced patent application, and for the indication of allowability once various formal matters and informalities are corrected.

Remarks and Arguments on Claim Rejections due to 35 USC §112
as stated in the Office Action, dated Jan. 19, 2007

Reconsideration of the rejection of claims 1-52 as being indefinite is requested, based on the following.

Regarding claims 1, 17, 26 and similar on claim 33, 43 and 47, the recitation "a circuit to individually provide input and output reference levels for each of said capacitor switching stages, building the input reference levels and the output reference levels for each of said translinear amplifiers, comprised within said capacitor switching stages" as being indefinite and Figure 10b of the present application, showing that circuit (Temp-Comp)

only generates a reference signal (Vref) as „input to the translinear amplifiers" as being misdescriptive, is now corrected. The specification and drawings are amended in two ways: First, an amended **Fig. 10b** now shows an input, receiving the output reference voltage as it is provided by the reference circuit **RefCirc** of **Fig. 6** and as it was already described in the specifications, For improved understanding, the polarity of the compensating transistor device is also reversed in **Fig. 10b** to directly match with the switching device of **Fig. 5**. Second, for the previous and unmodified **Fig. 10b**, now renumbered to **Fig. 10c**, additional description is provided in the specification to reflect the differences to the new **Fig. 10b**. The compensating transistor shown in **Fig. 10c** directly matches with the switching device of **Fig. 9**. These amandments should remove the noted confusions in many areas throughout the specification and claims.

The following two paragraph are amended, respectively added to specifically improve the description of the temperature compensating circuit:

Furthermore, a concept of this disclosure is to compensate the temperature deviation, caused by the temperature characteristics of the switching device; **Fig. 10b** presents this concept, which shows a temperature compensating circuit **Temp-Comp** in addition to said circuit to control the switching operation **Switch-Ctrl**, as shown in **Fig. 5**. One method is to use a device **N2-10** of the identical type of the switching device **N1-10** to produce a temperature dependent signal. A temperature compensating voltage, produced by said device **N2-10**, is added to the output reference signal **Ref-out-10**, now resulting in a temperature compensated output reference signal **Ref-out-c-10.** The input of said temperature compensating circuit **Temp-Comp** is connected to the reference circuit **RefCirc** of **Fig. 6** and its output ~~and feed it as compensating voltage **Vref-10**~~ is then provided ~~in~~to the output reference point **Voutn-10** of the translinear amplifier. This compensation technique will mirror the exact equivalent of the temperature error into the switching control signal **Vg-10** and compensate its temperature error. The output reference point **Voutn-10** in **Fig. 10b** is the same point as the reference signals **Ref-out** in **Fig. 5**.

As already described with **Fig. 9**, a simplified solution providing an identical output reference level to all translinear amplifiers could be to connect a common signal to all output reference points **Ref-out** (equivalent to **Voutn** of the translinear amplifiers) in common. In the case of providing an identical temperature compensated reference voltage as a common signal, it would be sufficient to implement a single temperature compensating circuit to serve all said output reference points **Ref-out** in common. **Fig. 10c** presents such simplified and common temperature compensating circuit.

It is obvious to those skilled in the art, that a common output reference signal can be implemented with as single implemetation of said temperature compensating circuit **Temp-Comp**. However, for clarity, a possibly intended solution of the circuit presented in Fig. 10c is explicitely mentioned.

Regarding claim 33, the recitation " said signal" on line 18 as being indefinite refers to "an input signal, dependent on the tuning voltage" and should be read as the phrase "said signal, dependent on the tuning voltage".

Further regarding claim 33, the recitation "said input reference" on line 21 refers to the input references of "input and output reference levels".

Further regarding claim 33, to explain the phrase "the capacitor is switched on with increasing/decreasing share" as used in the claims, the specification is amended in two places to exlain the meaning of said phrase.

Regarding claim 43, the recitation "to a translinear amplifier, a circuit to take over control of said switching device to drive it to a fully-on status, when said switching device operates outside its steady ramp-up/ramp-down area ..." on lines 13- 18 refers to the additional cut-off circuits of Fig. 10a, which are in addition to Fig. 9 As Fig. 6 and 9 show multiple circiuits of Fig. 5, claims 17 and 43 refer to translinear circuits each with additional components, as presented in Fig. 10a. Their function has been clearly described in the specification as follows:

Another key point of the invention is the implementation of signal cutoff functions at both ends of the steady ramp-up/ramp-down area. At the end-points of said steady transition area, where further linear change of the switch control signal **Vsw** would have nearly no further effect on the switching device to change its resistance RDS. After passing said end-points of said steady transition area, it would be desirable to not continue with a linear signal to control the switching device, but to apply a very steep signal change, thus driving the switching device very sharply into its minimum achievable resistance (RDSon as low as possible) or into its maximum achievable resistance (RDSoff as high as possible). Two additional circuits, **CutOffC-Lo** and **CutOffC-Hi** in **Fig. 10a**, perform said steep signal change, where one of said two additional circuits takes over full control of the switch control signal **Vsw,** i.e. they "override" the normal control signal, as provided by the translinear amplifier itself. The end-points of said steady transition area,

where the steep signal change should appear are called the cut-off edges. Which of said two additional circuits is activated, depends on the switch status: to drive the switching device into minimum achievable resistance (RDSon as low as possible), the additional cut-off circuit **CutOffC-Lo** will be activated, or to drive the switching device into its maximum achievable resistance (RDSoff as high as possible) the additional cut-off circuit **CutOffC-HI** will be activated

Further regarding claim 43:

The recitation " an input signal" on line 20 refers to "an input signal, dependent on the tuning voltage".

The recitation "and a circuit to individually provide input and output reference levels for each of said capacitor switching stages" on lines 18-20 refers to Fig 6, where the circuit **RefCirc** provides a set of input reference levels and a set of output reference levels. The specification clearly describes their function.

The specification also presents the possibility to simplify the generation of output reference levels

Further the recitation "said circuit" on line 25 refers to a circuit to compensate the temperature deviation of said switching device on line 9. to a single signal, identified as common reference level C-Ref-out in Fig.9.

Regarding claim 47, the recitation " and a circuit to individually input and output reference levels for each of said capacitor switching stages, an input signal, dependent on the tuning voltage, dedicated for the voltage controlled capacitance change and provided to all of said capacitor switching stages; providing an individual input and output reference level for each individual capacitor switching stage" on lines 10-14, see the remarks to claim 43 for the same recitation.

Further the recitation " said signal" on line 17 as being indefinite refers to "an input signal, dependent on the tuning voltage" and should be read as the phrase "said signal, dependent on the tuning voltage".

And the recitation "the linear control signal" on line 21 lacking antecedent basis is solved by amending the claims to the recitation "a linear control signal"

The recitation "compensating the temperature deviation of said switching device, using said circuit to compensate the temperature deviation of said switching device" refers to line 9 of the same claim: "a circuit to compensate the temperature deviation of said switching device".

Thorough care is taken to not include by accident any new matter.

Reconsideration of the above rejection is therefore respectfully requested.

All claims are now believed to be in condition for allowance, and allowance is so requested.

It is requested that should there be any problems with this Amendment, please call the undersigned Attorney at (845) 452-5863.

Respectfully submitted,